Science (3)

Science

Grade(s) 3rd, Duration 1 Year, 1 Credit
Required Course

Course Overview

Students will learn about plants and their life cycles, scientific inquiry, mass and matter, force & motion, and personal health/safety.

Science (grade 3) courses involve observation, measurement, and description of simple systems. Course content may include the scientific process; life and environmental science; and physical, earth, and space science.

Scope And Sequence

Timeframe	Unit	Instructional Topics
2 Week(s)	Plants	1. Parts of Plants 2. Plant LIfe Cycles 3. Plants and Sunlight
Ongoing	Science as Inquiry	1. Science as Inquiry
2 Week(s)	Mass and Matter	1. Physical Properties 2. Physical Changes 3. Chemical Changes
2 Week(s)	Force and Motion	1. Forces affect objects. 2. Moving objects 3. Simple machines
2 Week(s)	Personal Health and Safety	1. Personal health

Materials and Resources

Scott Foresman teacher guide and student texts
Brain Pop, Jr.
Promethean Planet lessons
Materials showing the properties of mass and matter

Course Details

Unit: Plants

Duration: 2 Week(s)

Unit Overview

Students will study plants and their life cycles.

Materials and Resources

Scott Foresman teacher guide, student texts
Nature Study Site
Brain Pop Jr.
Promethean Planet lessons

Academic Vocabulary

Life cycle
photosynthesis
embryo
seed coat
cotyledon

Summative Assessment

Teacher created tests w/text as guide
Student projects

Topic: Parts of Plants

Duration: 2 Day(s)

Topic Overview

Students will understand plant life cycles

Learning Targets

Parts of a seed and parts of a plant.
Students will identify the edible portion of plants.

Parts of Plants
Students will identify particular plants using the qualities of the leaves, roots and stem of plants

Plant adaptation
Students will understand how plant characteristics enable their survival in different environments.

Topic: Plant LIfe Cycles

Duration: 2 Day(s)

Topic Overview
Students will understand that plants have life cycles during which they grow, reproduce and die.

Learning Targets
Describe the life cycle of a flowering plant.
Students will illustrate the life cycle of an apple tree.

Students will describe the life cycle of a conifer.
Students will illustrate the life cycle of a conifer.

Topic: Plants and Sunlight **Duration:** 2 Day(s)

Topic Overview
Students will understand how plants use sunlight to make their own food.

Learning Targets
Plants meet their needs.
Students will understand the meaning of photosynthesis. Students will understand plants need water, air, nutrients and sunlight to meet their needs.

Unit: Science as Inquiry **Duration:** Ongoing

Unit Overview
Students will understand the scientific method and set up experiments in the classroom

Materials and Resources
School-wide scientific method organizer.
Internet resources for experiments
Brain Pop for scientific method

Academic Vocabulary
inquiry, observe, compare, classify, predict, measure, use models, communicate, data, infer, hypothesize, variables, experiment, scientific method, procedure, conclusion

Summative Assessment
Teacher observation, classroom experiments, view and evaluate fourth grade experiments on display

Topic: Science as Inquiry **Duration:** Ongoing

Topic Overview
Third grade introduction to the scientific method which gives students an understanding of vocabulary used in inquiry.

Learning Targets
Formal steps of the scientific method.
Students will learn to identify steps of the scientific method.

Apply scientific method throughout the year.
Students will apply scientific method skills using graphic organizers quarterly.

Unit: Mass and Matter **Duration:** 2 Week(s)

Unit Overview
The students will identify characteristics of matter as well as the scientific vocabulary.
The students will be introduced to physical and chemical changes of matter.

Materials and Resources
Science textbook, internet resources

Academic Vocabulary
solid, liquid, gas, state, matter, chemical change, chemical property, physical change, physical property, condense, evaporate, freeze, melt, mass, volume,

Topic: Physical Properties **Duration:** 2 Week(s)

Topic Overview
Students will understand properties of liquids, solids, and gases.

Learning Targets
Three states of matter

Students will learn the 3 states of matter are solids, liquids, and gases.

Observe & measure matter.

Students will understand the difference between mass and volume.

Topic: Physical Changes **Duration:** 1 Day(s)

Topic Overview

Students will understand physical changes of matter and their physical properties.

Learning Targets

Physical change is a change in the way matter looks.

Students will understand how temperature can affect the state of matter.

Topic: Chemical Changes **Duration:** 2 Day(s)

Topic Overview

Students will understand that in chemical change a new kind of matter with different properties is formed.

Learning Targets

Chemical change in matter; Chemical properties of matter

Students will understand that a chemical change in matter results in a new kind of matter with different properties.

Unit: Force and Motion **Duration:** 2 Week(s)

Unit Overview

The students will understand that an object's motion can be described by tracing and measuring its position over time. The position and motion of objects can be changed by pushing and pulling. Students will identify simple machines and the work they do.

Materials and Resources

Ch. 15 Science textbook, Natl. geographic video Simple Machines, Brainpopjr., materials brought from home to construct a simple machine

Academic Vocabulary

force, gravity, motion, direction, distance, speed, inclined plane, lever, pulley, screw, simple machine, wedge, wheel & axle, work

Topic: Forces affect objects. **Duration:** 3 Day(s)

Topic Overview

Forces can change the motion of objects. Gravity, magnetism, and friction are forces.

Learning Targets

Understanding motion, pushes, and pulls

Students will model the use of forces to move objects.

Gravity & friction

Students will demonstrate the relationship between gravity and friction, making both in school and out of school connections.

Magnetism

Students will conduct experiments using magnet kits.

Topic: Moving objects **Duration:** 1 Day(s)

Topic Overview

Students can describe the motion of an object by its distance, direction, and speed.

Learning Targets

Motion

Students will describe the movement of an object by using the terms distance, direction, and speed.

Topic: Simple machines **Duration:** 2 Week(s)

Topic Overview

Students will understand that simple machines make work easier by changing the strength or direction of a force.

Students will construct a simple machine at home to bring to school to present to the class as a culminating project.

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Learning Targets

Understand & identify simple machines and the work they do.

Lever, wheel & axle, inclined plane, pulley, wedge, screw

Design and build a simple machine

Students will design and build a simple machine and describe the work it does. Students will demonstrate and present their simple machine to the class.

Unit: Personal Health and Safety

Duration: 2 Week(s)

Unit Overview

This covers many topics related to personal health, i.e. checkups, personal hygiene, and personal safety.

Materials and Resources

Health textbook, Section C; classroom visit from health professional

Academic Vocabulary

Hygiene, checkups, vision, personal safety, plaque,

Topic: Personal health

Duration: 2 Week(s)

Topic Overview

Students will understand components of personal health.

Learning Targets

Personal health

Students will identify components related to personal health, keeping themselves healthy,and making use of medical community to assist personal health.

Personal safety

Students will learn basic personal safety practices i.e. using a bike helmet,